

Experts' opinion on challenges facing the development of green bonds on the Nairobi Securities Exchange

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ABSTRACT

Climate change is arguably biggest challenge for 21st Century. Africa while being the least polluter in the world, is the most vulnerable to the effects of climate change. The Paris Agreement, Sustainable Development Goals (SDGs), African Development Bank's strategy 2013-2022, Kenyan National Climate Change Action Plan among others all seek to achieve inclusive green growth by building resilience to climate shocks and providing sustainable infrastructure - this will require substantial financial resources. Government funds alone will never be enough to deal with the threat posed by climate change – the private sector must be involved. Green bonds allow both Government private sector to do their part.

A green bond is differentiated from a regular bond by its 'Green' label, which signifies a commitment to exclusively use the funds raised to finance "green" projects and infrastructure. The Climate Bonds Initiative projects that green bonds worth 250 Bn USD will be floated in 2018 compared to 155.5 Bn USD in 2017. In Africa, only South Africa and Nigeria have listed green bonds, signifying a commitment to the Paris agreement. More than a decade after the listing of the first green bond, Kenya is yet to float a green bond.

The Kenyan bond market is underdeveloped with corporate bonds accounting for only 1% of all bonds listed with government bonds accounting for 99%. The bond market does not attract international investors which is completely opposite to the equity market. The government has been a key player in the stakeholder engagement process and will be central to by incentivizing issuers and investors. There is however a lack of education on green bonds along the value chain.

This qualitative study employed a purposive sample of experts and through structured interviews, sought to pinpoint challenges to and opportunities for development of a green bond market in Kenya. The study concludes that rating of green bonds will be important mostly for international investors and does not hinder floating of green bonds. Reporting is a critical element to development of a green bond market being the only element that distinguishes a green bond from a vanilla bond. As such guidelines on reporting and building capacity in the area of green verification and certification among service providers will be crucial to supporting a local green bond market. Kenya will foreseeably look to international experts to assist in verifying, rating and reporting on green bonds. Kenya presents future opportunities in providing digital green bonds being a world leader in mobile money market.

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GLOSSARY OF TERMS

AMMC - L'Autorité Marocaine Du Marché Des Capitaux

CBI – Climate Bonds Initiative

GBP – Green Bonds Principles

GDP – Gross Domestic Product

ICMA – International Capital markets Association

JSE- Johannesburg Stocks Exchange

LuxSE – Luxembourg Stocks Exchange

NSE – Nairobi Securities Exchange

REITs – Real Estate Investment Trusts

SDGs – Sustainable Development Goals

AfDB- African Development Bank

UNFCCC - United Nations Framework Convention on Climate Change

OECD – Organization for Economic Cooperation and Development

GBPK – Green Bonds Programme Kenya

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1 INTRODUCTION

The Green Bond Principles (GBP) defines green bonds as “any type of bond instruments where the proceeds of its issuance will be exclusively applied to finance or re-finance in part or in full new and/or existing eligible green projects which also follows the four Green Bond Principles” (ICMA, 2015). There are no explicit standards as to what is considered ‘green’ (OECD, 2015). In fact, according to CBI/HSBC (2015), unlabeled green project bonds and green asset backed securities totaled about USD 15 Bn in 2014. Practically however, proceeds raised from the issuance of green bonds are used to finance projects that among others prevent pollution, promote renewable energy, sustainable agriculture operations, biodiversity conservation, clean transportation and sustainable water management which are areas that hold significant potential in Africa.

Bonds may be issued by the government as treasury bonds or by the private sector through corporate bonds. Other issuers of bonds include municipalities and development finance institutions among others. Bonds operate in the following way; the party raising funds also called *issuer* commits to make interest payments regularly to the investor(s) at a pre-agreed rate also known as the *coupon rate* on the amount borrowed, also referred to as the *principal / face / nominal amount*, until a *maturity date* which is also pre-agreed. Once the bond matures the *issuer* ceases making interest payments and goes on to repay the principal amount of the bond to the investor(s) in full. Bonds are classified as debt investments because the interest payments are made generally at set periods of time and are predictable. Bonds are also referred to as fixed income securities. Depending on the issuer and the potential return and type of investors targeted, bonds take different structures such as private placement, covered bonds, senior and secured and unsecured formats.

A “green bond” is differentiated from a regular bond by its label, which signifies a commitment to exclusively use the funds raised to finance or re-finance “green” projects, assets or business activities (ICMA, 2015). Green bonds come in six forms corporate bonds, project bond, asset-backed securities (ABS), supranational, sub-sovereign and agency bonds, municipal bonds and financial sector bonds (OECD, 2015).

Sustainability and impact investing have become a business priority for many organisations in modern times. Green bonds provide a commercially practical way to finance changing

business models for many different industries. In the energy sector for example, green bonds can be used to increase the focus on renewable energy sources such as natural gas, solar and wind power. Taking South Africa as an example, The Pension Funds' Act Regulation 28 requires that a fund's investment portfolio must include environmental, social and governance (ESG) considerations. Investing in green bonds for a pension fund will be an ideal way to fulfil this requirement. Investors will play a critical role in the implementation of the 2015 Paris Agreement on Climate Change. Recognition of the strategic materiality of climate change is translating into investor action in terms of investment strategy, investor engagement, capital allocation, dialogue with policymakers and transparency over their actions and impacts. As at June 2018, the use of green bond proceeds according to the Climate Bonds Taxonomy was as follows;

Table i: Taxonomy of use of green bonds proceeds: Climate Bonds Initiative (2018)

Sector	Amount invested (USD)
Energy	164,320,498,531
Buildings	104,999,618,575
Transport	62,567,402,511
Water	47,204,252,662
Waste	17,484,008,959
Adaptation	11,954,465,831
Land Use	11,854,556,201
Industry	933,941,879
ICT	53,532,157

The development of bond market plays a crucial role in promoting partnerships between the government and the private sector in green development. Successful development of bond market requires several conditions such as a developed money market, favorable macroeconomic policies, market participation, appropriate trading system and a sound legal and regulatory framework. Experience also shows that development of government bond market is crucial in paving way for development of a corporate bond market (Mbewa, Ngugi, Kithinji, 2007). More broadly, a suitable investment climate including policy and regulatory architecture for low-carbon investment is crucial to encouraging international private sector investment in green bonds.

1.1 Background to the research

The United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992, which tasked the UNFCCC secretariat with a growing responsibility to strengthen the global response to climate change. Later in 1997, 127 countries ratified the Kyoto Protocol, which created binding emission reduction targets for developed countries – the United States did not ratify the protocol while Canada, Japan and Russia pulled out in 2011. In Paris in December 2015, countries pledged to limit the rise of global average temperature below an ambitious 2 °C in what was called the Paris Agreement.

In 2016, the seventeen sustainable development goals (SDGs) came into force with a specific goal No. 13 on climate action. The SDGs also emphasize the need for clean energy, clean water and sanitation among others- arguably climate action affects practically all goals one way or another. Climate change and variability pose a significant threat to achieving sustainable development and human well-being in Kenya (Kenya Ministry of Environment and Mineral Resources, 2013). The implementation of the Kenyan National Climate Change Action Plan (KCCAP) and the Kenya National Adaptation plan (KNAP) will require substantial financial resources. The initial analysis within the National Climate Change Response Strategy (NCCRS) suggests that the financial requirements to move Kenya onto a low-carbon, climate resilient growth path may be in the region of KES 235 Bn (\$2.75 Bn) per annum split roughly equally between mitigation and adaptation. (NCCAP-Finance, 2012). Although international resources from both the public and private sector can play a key role in Kenya's transition, they will need to be complemented by domestic financial resources both from the public and private sector. (NCCAP-Finance, 2012). As such, access to climate finance is critical since it will enable Kenya effectively and efficiently adapt to and mitigate the effects of climate change and variability hence transition to a low carbon resilient pathway.

With the green movement gaining currency, several terminologies have emerged in this area and are most times used interchangeably. Green finance refers to a merging of the world of finance and environmentally sustainability practises using diverse financial instruments and products. The green finance space brings together many players among them financial lenders and investors. CPI (2011) describes climate finance as financial resources dedicated to mitigation and adaptation activities, capacity building, research and other efforts aimed at transitioning towards low-carbon, climate-resilient development. Climate finance is given in form of market rate loans and concessional loans mostly through bilateral and multilateral

institutions like IFC or through the private sector. Climate finance may also be channelled as equity, policy incentives, risk management tools, grants and carbon offset flows. Carbon finance relates to funds to mechanisms of funding low-carbon projects and initiatives and accounts for a small proportion of climate finance (CPI, 2011). What is common with these terminologies is that they all speak to the need for finance as an answer to climate change and funding of green projects with the end goal of a green economy in mind. A green bond is a financial instrument that can be used to mobilise finance for all the above goals.

The first green bond was floated on the Luxembourg Stock Exchange (LuxSE) in 2007. According to data from Climate Bonds Initiative (CBI), which monitors the green-labeled bond market, there have been 2,480 transactions issuing green bonds worth over USD 155 Mn in over 20 currencies as at February 2018. As at June 2018, the top 5 countries that have issued green bonds are;

Table ii: Top 5 countries that have issued green bonds: Climate Bonds Initiative (2018)

Country	Issued (USD)
USA	97,577,636,867
China	56,476,102,047
France	45,871,145,087
Germany	26,694,762,001
Netherlands	17,652,216,460

According to data from the CBI, the Johannesburg Stock exchange (JSE) is the leading green bond market in Africa that had floated green bonds in Africa, with 24 bonds worth over ZAR 22 Mn from multilateral institutions, institutional investors and the local governments of Cape Town and Johannesburg as at December 2017. CBI states that to date, only 5 countries have issued sovereign green bonds as a commitment to the Paris agreement - Poland, France, Belgium, Fiji, Nigeria and Belgium in that order. So, is Africa and Kenya in particular always late or is it catering to its needs?

As low carbon and climate resilient infrastructure investments continue to be given global priority, development of the capital markets to support green finance in the form on green bonds becomes a priority as well. Corporate bonds were introduced in Kenya in mid-1990s, but the growth momentum has not been maintained. Twenty-two years after the first corporate bond was listed, there are 23 corporate bonds listed on the Nairobi Securities Exchange (NSE) as at October 2018. The NSE is also yet to float a green bond.

The Nairobi Securities Exchange (NSE) was registered as a voluntary association of brokers under the Societies Act in 1954. Institutions involved in bonds trading include investment banks, investment advisors, the central depository and settlement corporation (CDSC), stockbrokers, fund managers, nominated advisors (nomads), the capital market authority and the Nairobi Securities exchange. These players jointly constitute the capital market ecosystem. This study shall seek the opinion of experts on opportunities available and conditions necessary for the development of green bonds in the NSE.

1.2 Problem definition

Climate change is probably the most complex and challenging environmental problem facing the world today (UNFCCC, 2015). Africa is highly vulnerable to the effects of climate change, environmental shifts, and associated social effects which threaten the health of populations and economies. Climate change interacts with local environmental issues, such as land degradation, the depletion of natural resources, air and water pollution. Growing populations and urbanization rates (Uche D, Anthony N., 2016). Temperatures in Africa are projected to rise faster than the global average increase during the 21st century (Christensen et al., 2007; Joshi et al., 2011; Sanderson et al., 2011; James and Washington, 2013). Of the 17 SDGs, the goals on zero hunger, clean water and sanitation, affordable and clean energy, climate action and good health and well-being point to the need for innovative financing to sustainable business practices and green initiatives.

Even today, during a period of unprecedented industrialisation on the continent, Africa accounts for less than 4% of the world's annual greenhouse gas emissions, which experts say are responsible for global warming (International Panel on climate change, Fifth Assessment report AR5, 2014). With one in four people in sub-Saharan Africa still living in extreme poverty, hundreds of millions of people do not have the same safety net afforded those in wealthier, industrialised nations.

The African Development Bank's strategy 2013-2022 is founded on two objectives; inclusive growth and transition to green growth. The AfDB seeks to achieve the second objective through building resilience to climate shocks, providing sustainable infrastructure, creating ecosystem services and making efficient and sustainable use of natural resources such as

water. (AfDB, 2013). The Bank has initiated a green bond program to address this very area of focus. It is therefore clear that Africa more than ever needs to benefit from research work carried out around green bonds.

Agriculture is the main economic activity in terms of employment share in the sub-Saharan region; however, 98% of it is rain-fed (FAO, 2002). Kenya is the largest economy in East Africa economy and while the economy is diversifying, it remains largely dependent on natural resources. Agriculture and tourism account for nearly half of gross domestic product (GDP). Drought is the prime recurrent natural disaster in Kenya and costs of the drought over 2008-2011 have been estimated at Ksh 968.6 Bn (US\$ 12.1 Bn), which is broken down to Ksh 64.4 Bn (US\$ 805.6 Mn) for the destruction of physical assets, and Ksh 904.1 Bn (US\$ 11.3 Bn) for financial losses across all sectors (KCCWG, 2017). According to the Kenya National Climate Change Action Plan 2013-2017, extreme climatic events could cost the economy as much as \$500 Mn a year, equivalent to about 2.6% of the country's GDP as at 2013- these numbers are staggering.

The Report of the Secretary-General's High-Level Advisory Group on Climate Change Financing notes that *"Enhanced private flows will be essential to economic transformation towards low-carbon growth"*. The report identifies the 'overall challenge' as the range and potential of instruments available to meet the goal of US\$100 Bn per year by 2020 to address the needs of developing countries. This challenge will likely require implementation of a mix of new public sources, a scaling-up of existing public sources and increased private flows. While the scale of investment needs is relatively well known, policymakers need a clearer understanding of how to mobilise sufficient funds through green bonds to finance green initiatives. Strong commitments to domestic mitigation and the introduction of carbon-based instruments in developed countries are not only important but necessary for mobilizing climate financing, both public and private. Domestically-based instruments in developed countries have advantages in terms of political acceptability, allowing flexibility and tailoring to the circumstances of these countries. Green bonds have the potential to tap into a deep global pool of capital with a diverse base of investors than regular bonds or other asset classes.

Developing countries have a challenge with underdeveloped financial systems in areas crucial for green investment to enable large and small businesses and households to make investments and manage the risks they face. In Kenya for example, the length of treasury

bond market is shorter than that of developed bond markets, the trading system is not harmonized with intermediaries using different pricing models, and the regulatory framework is also weak to accommodate diversification of corporate bonds. (Mbewa, Ngugi, Kithinji, 2007).

Government resources alone cannot be enough to build resilience to extreme weather and the threat that it poses – private sector players must be involved. It may be argued that governments in Africa and specifically Kenya have more pressing needs as compared to other developed economies and that development of a green bond market is not a priority at this time. The level of development of Kenya's bond market and the NSE suggests that the country is far from developing a market for green bonds. Lack of a green bond market on the NSE denies Kenya and the region the ability to mobilise the much-needed finance from domestic and international investors in order to respond to the effects of climate change and transition into greener economies.

1.3 Research questions

The study seeks to answer the following main research question;

“What do experts think are the key factors affecting development of a green bond market in Kenya?”

To address the main research question, the research will attempt to answer the following supporting research questions;

1. What are the differences in the lending practices in Kenya and South Africa?
2. Determinants of unsecured lending in Kenya and South Africa
3. To investigate possible policy interventions for regulation of the credit market in Kenya and South Africa?
4. What is the effect of easy lending practices in Kenya and South Africa?

1.4 Research Objectives

The study aims to seek the opinion of experts on opportunities available and conditions necessary for the development of green bonds on the NSE. Specifically, the study seeks to address the following research objectives:

1. To scan the capital market ecosystem to establish its readiness for floating of green bonds
2. To identify risks faced by investors and identify if mitigations exist and/or if available mitigations are robust to address the risks.
3. To identify current green initiatives/ projects proposed by government and other actors and check if they are in tune with international best practise for the purposes of attracting investors.
4. To establish the contribution of government toward establishment of a green bond market in Kenya.

1.4 Conclusion

Climate change and sustainability of the environment are issues that continue to gain currency in modern times not just in Kenya but internationally. The international green bonds market has been growing year on year for the last ten years and Kenya seems to still be unattractive to investors for a variety of reasons including the lack of an elaborate green bond market on the NSE in the first instance. With increasing focus by local and foreign investors towards green investments, it is necessary to assess the operating environment for African stock exchanges with an aim to enable issuers tap into this pool of capital that can only grow deeper and wider.

2 Overview of Relevant Literature

2.1 Overview

Literature for this study was drawn from several sources to gain a wide understanding of concepts and issues relating to green bonds. Owing to lack of specific literature on green bonds in Kenya, relevant literature has been reviewed to put in context the state of the bond market in Kenya considering the international green bond market. Literature has been reviewed to understand the precursor conditions for successful floating of green bonds in the Nairobi Securities exchange.

2.2 Perspectives of green investing

Climate change is arguably biggest challenge for 21st Century. The COP21 meeting which brought about the Paris climate agreement aims to deal with the threat of global greenhouse gas emissions responsible for global warming. The agreement aims to promote international cooperation in enhancing mitigation and adaptation efforts further to the Cancun adaptation framework. The Paris accord provides that developed countries take the lead in mobilising climate finance in a variety of sources, instruments and channels.

Sustainable responsible investing (SRI) or simply Responsible investing (RI), and impact investing are terms used interchangeably. It basically refers to investing that in addition to targeting attractive returns also targets some social or environmental aims – this form of investing recognizes that environmental, social and governance factors are material to risk and return and should be incorporated into investment strategies. The nature of green bonds is such that they serve the dual purposes of an investment instrument and a sustainable development instrument with the benefit of investors knowing what is happening with their money. Giamporcaro and Pretorius (2012) define SRI as a generic term covering any type of investment process that combines investors' financial objectives with their concerns for environmental, social and governance (ESG) issues.

The UN Principles for Responsible Investment was launched in 2006 to be the world's leading proponent of responsible investment. UNPRI proposes six principles proposed as a voluntary and guide incorporation of ESG matters into investment practice. Signatories to the PRI include investment managers, assets owners, service providers among others and have

been increasing year on year to reach 2,039 signatories as at June 2018. Kenya does not have signatories to the PRI which is a sign that perhaps investment managers in Kenya are not keen on responsible investing and perhaps therefore the slow development of the green bond market. In Africa however South Africa, Nigeria, Morocco, Egypt, Botswana, Mauritius and Namibia have signatories to the PRI.

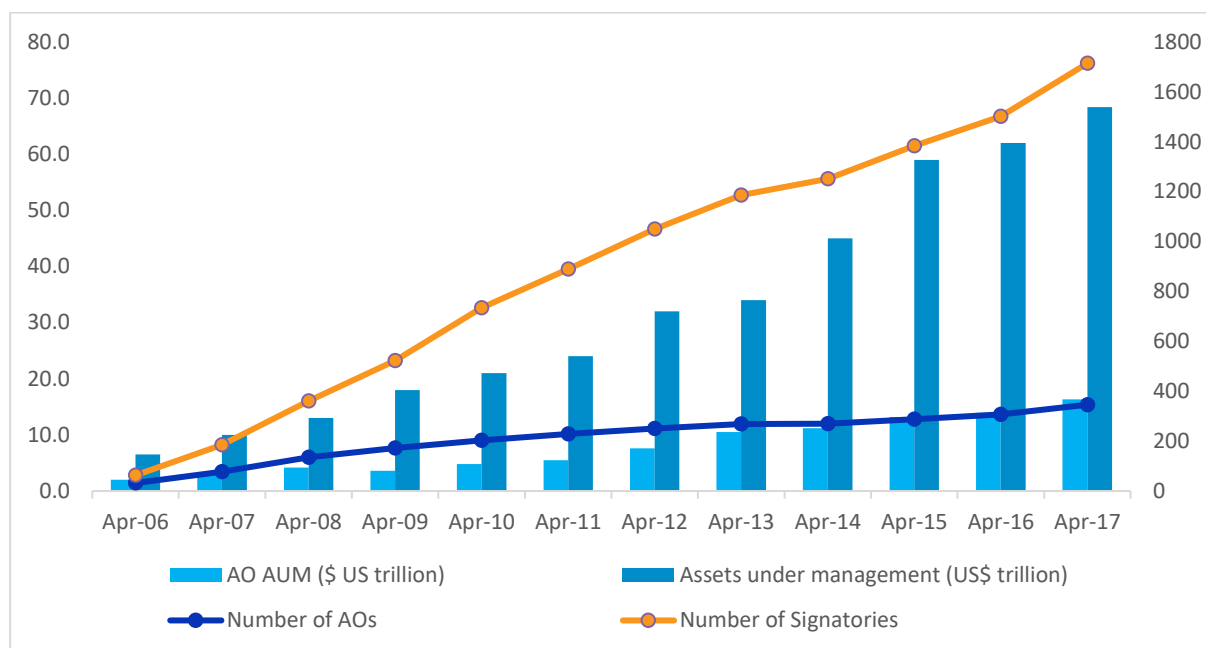


Figure i: Growth in number of UNPRI signatories: Principles of Responsible Investment (2018)

2.3 State of international green bond market

A green bond was first issued in 2007 by the European Investment Bank (EIB) and World Bank who issued a AAA-rated bond on the Luxembourg Stock Exchange (LuxSE). According to data from Climate Bonds Initiative (CBI), which has been monitoring the green-labelled bond market, there have been 2,480 transactions issuing green bonds worth over USD 155.5 Mn as at December 2017. The World Bank for example had as at February 2018 issued an equivalent of over USD 10 Bn in Green Bonds through 154 transactions in 18 currencies according to data from CBI.

The labelled Green Bond market has multiplied more than fivefold in size from 2013 to 2016, when it reached USD 81 Bn in new issuances. The market grew by 92% from 2015 to 2016

closed at USD 31.2 Bn in 2017 with the strongest performance in the last quarter of 2017. The total green bonds floated as at for the year 2017 totalled USD 155.5 Mn.

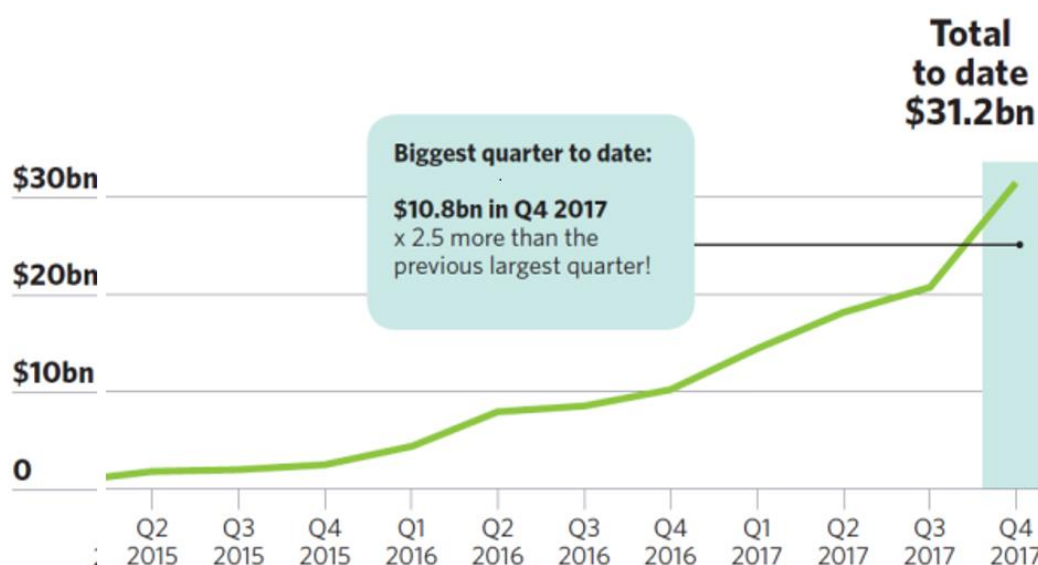


Figure ii: Market growth of Green bonds 2015-2017: Climate Bonds Initiative (2018)

Poland, France, Belgium, Fiji and Nigeria are the only countries that have issued sovereign green bonds as a commitment to the Paris agreement. Further beyond, India a heavy polluter, through the Securities and Exchange Board of India has introduced listing mechanisms that will encourage and facilitate future green issuances as the country simultaneously plans numerous large-scale green projects.

In Africa, the Moroccan Capital Market Association (AMMC) collaborating with the IFC has produced guidelines explaining the concept of green bonds and issued practical instructions for issuance and has gone ahead to list a green bond by Moroccan Agency of Sustainable Energy (MASEN) which will benefit from a sovereign guarantee from the Kingdom of Morocco and will be channelled toward solar energy projects with the latter. South Africa has made considerable strides in tapping into the green bond market having listed 24 green bonds in the Johannesburg Stock exchange (JSE) as at February 2018 worth over ZAR 22 Mn from multilateral institutions, institutional investors and the local governments of Cape Town and Johannesburg, according to data from CBI.

Stock exchanges with dedicated green bonds segments increase green bond visibility and their listing requirements promote transparency and market integrity (CBI, 2018). Globally, only 13 stocks exchanges in the world have a dedicated green bond segment as at 30th June

2018, only one of these stock markets is in Africa which is still in its infancy having only been launched in October 2017.

Table iii: Exchanges with dedicated Green bonds section: Climate Bonds Initiative (2018)

Name	Type of dedicated section
Borsa Italiana	Green and Social Bonds
Helsinki Stock Exchange	Sustainable Bonds
Japan Exchange Group	Green and Social Bonds
Johannesburg Stock Exchange	Green bonds
London Stock Exchange	Green bonds
Luxembourg Stock Exchange	Green bonds
Mexico Stock Exchange	Green bonds
Oslo Stock Exchange	Green bonds
Santiago Exchange	Green and Social Bonds
Shanghai Stock Exchange	Green bonds
Stockholm Stock Exchange	Sustainable Bonds
Taipei Stock Exchange	Green bonds
Vienna Exchange	Green and Social Bonds

The stock market is expected to accelerate economic growth by providing a boost to domestic savings and increasing the quantity and the quality of investment (Singh, 1997). While the green bond market's integrity so far remains robust (Ceres, 2015), investors need to be assured that the proceeds of the green bonds in which they invest are being allocated to appropriate qualifying projects that generate the desired "green" impacts. To secure this assurance in the absence of market-wide standardization, the "majority of issuers" (CBI/HSBC, 2015) choose to retain specialist service providers and undergo independent review through assurance processes that include second-party reviews and consultation, audits and third-party certifications. For instance, the EIB, currently the largest green bond issuer, reports in detail on the allocations of its Climate Awareness Bond proceeds in annual audited sustainability reports and in a dedicated newsletter. According to Barclays (2015), these bespoke reviews help investors understand green credentials to the extent that the quality of independent reviews and impact reporting has become a significant differentiator for the investor base, with greater investor demand for the bonds of issuers that provide high-quality information about the environmental benefits of the underwritten projects.

The green bond market is not formally regulated. The Green Bond Principles (GBP) initiative is a collaborative open architecture process that pulls in views from issuers, investors and intermediaries in the green bond market as well as observers. The GBP is administered by

the International Capital Market Association (ICMA) and has developed voluntary guidelines whose aim is to clarify the approach for issuance of a green bond and recommend transparency and disclosure to promote integrity in the development of the green bond market. A key element in the development of standards involves working out exactly how to verify the proper use of proceeds. While shortcomings in the disclosure of information about the use of proceeds may be alleviated by the guidelines set out in the GBP, it is worth to note that BGP principles are voluntary guidelines and do not currently stipulate material requirements for the type and nature of activities, nor do they require a certain threshold of environmental benefits to be met.

The CBI compiled data highlighting developments in the green bond market at 30th June 2018 and the following table summarizes the top 10 exchanges for green bond listings around the world. From the compilation we also see that having a dedicated green bond section helps in spurring investment given 4 out of the 13 exchanges with a dedicated section in the world are in the top 10. It is also evident that having the green bonds reviewed by a third party helps in spurring investment but does not necessarily guarantee investment in green bonds in the top destinations. Having the green bonds certified by CBI is not strikingly crucial from the data possibly because it is a relatively new development in the green bond space having only started in October 2014. However, given all the exchanges in the top 10 have at least a portion of the listed bonds certified by the CBI, it has the potential of influencing investment decisions in future.

Table iv: Top 10 green bonds destinations: Climate Bonds Initiative (2018)

	Listing venue	Dedicated section	Certified Climate Bonds (CCB)	With external review (excl. CCB)	No external review	Total Green Bonds listed
1	All German SE	No	3,860 m	37,032 m	4,693 m	45,585 m
2	LuxSE	Yes	884 m	32,293 m	810 m	33,987 m
3	Paris	No	3,378 m	21,786 m	835 m	25,999 m
4	LGX	Yes	1,071 m	16,975 m	5,819 m	23,865 m
5	LSE	Yes	1,876 m	15,334 m	744 m	17,954 m
6	Frankfurt	No	1,577 m	10,338 m	4,122 m	16,037 m
7	SGX	No	1,851 m	12,136 m	1,000 m	14,987 m
8	Borsa Italiana	Yes	-	11,555 m	2,816 m	14,371 m
9	SIX	No	272 m	7,806 m	800 m	8,877 m
10	Berlin	No	159 m	6,877 m	1,494 m	8,530 m

2.4 Pricing of green bonds

There is no model for determining prices of bonds - in the case of treasury bonds in the primary market, the government determines the interest rates whereas for corporate bonds the issuing company, in consultation with the expert who prepares the prospectus, determine the bond price. In the secondary market for treasury bonds and corporate bonds, the stockbrokers and the buyer of bond arrive at the price through negotiation. (Mbewa, Ngugi, Kithinji, 2007)

The CBI in their report on the Green Bond market in Europe (2018) observed how green bonds behave in the primary markets both in isolation and relative to vanilla equivalents. The CBI examined green bonds issued between January 2016 and December 2017, denominated in USD or EUR, and a minimum size of EUR300m. The methodology captures 123 bonds: 62 of these have a country of risk located in one of 13 European countries. 54 are denominated in EUR, and the remaining 8 were issued in USD. The CBI study noted that green bonds price was tighter than initial price thoughts and is oversubscribed. This is typical and not any different from vanilla bonds. For Q2, Q3 and Q4 2017, CBI compared green bond data with that of a vanilla sample and concluded that green bonds achieved, on average, the same as, or higher levels of oversubscription than a vanilla cohort. In conclusion, CBI noted that, just under half of the European bonds tightened by more than their vanilla cohort during the pricing process. The CBI built yield curves on the issue date of 42 green bonds in their sample to determine whether there was a new issue premium, or lack of it. Overall, we found that 19 green bonds exhibited a traditional new issue premium at issue. Ten bonds priced on their existing yield curves, while 13 bonds priced inside their yield curves, thus exhibiting a *greenium*. While the data is too limited to draw definite conclusions, we can say that those buying green bonds cannot assume that they will receive a new issue premium.

2.5 State of bond market in Kenya

A study by Mbewa, Ngugi & Kithinji (2007) have focused on development Kenya's bond market - both corporate and treasury bonds provided by the government. The bond market in Kenya trades in both the treasury and corporate bonds. While treasury bonds were introduced as early as mid-1980s, corporate bonds came to the market in 1996 during the reform period (Mbewa, Ngugi & Kithinji, 2007). The Kenyan capital markets ecosystem in Kenya consist a number of players who all have unique but interdependent roles. These

players include the Central Depository and Settlement Corporation, investment advisors, investment banks, fund managers, stock brokers, REITS managers who are all licensed under the Capital Markets Act. The Capital Markets Authority (CMA) is the agency responsible for supervising, licensing and monitoring the activities of NSE. It plays a critical role in Kenya's economy by facilitating mobilisation and allocation of capital resources to finance long-term productive investments. The NSE is a self-regulating body that defines the rules of the game in bonds trading with the approval of CMA and within the bounds of prescribed rules. The Capital Markets Authority remains the regulatory authority of capital markets, with the Nairobi Securities Exchange (NSE) only performing delegated roles as a capital markets intermediary.

A number of efforts have been made in Kenya in line with transitioning to a green economy including formulation of the Green Economy Strategy and Implementation Plan (GESIP) which is a collaborative effort with the treasury outlining policies of the government towards directing public sector investment towards a green economy, including raising a Sovereign Green Bond. The Green Bond Program Kenya (GBPK) was founded in March 2017 to accelerate the take-up of green bonds as a tool for Kenya to tap into international and domestic capital markets to finance green projects. In April 2017, IFC announced a USD 325 Mn Green Bond Cornerstone Fund which will invest in green bonds issued by Banks. The announcement has identified Kenya as one of the 24 countries that will benefit from this fund. Ultimately, this will require that public spending and private investment to be aligned with green technology, products and infrastructure.

2.6 Capital markets ecosystem in Kenya

CPI (2011) contends that many developing countries lack developed capital markets – i.e. a well-functioning banking system, a public debt market and/or a public equity market – requiring them to rely, instead, on international capital investments. The poorest of them must rely on development banks.

The Nairobi Securities exchange is an independent public agency under the ministry of Finance. The CMA monitors and regulates all activities of the NSE. The NSE lists equities on four segments namely Main investment market segment (MIMS), Alternative investment market segment (AIMS) for medium-sized companies, Growth and Enterprise Market Segment (GEMS) for small and medium sized companies and the Real Estate Investment

Trusts (REITS) for the property market. The NSE also lists corporate and government-issued bonds on the Fixed Income Market Segment (FIMS).



Figure iii: Kenyan capital markets ecosystem: Nairobi Securities Exchange (2018)

The Capital Markets (Foreign Investors) Regulations 2002 gives no restriction on participation by foreign investors in government securities, both in the auction and in the secondary market and therefore anyone can participate in the bond market.

The Capital Market Authority authorizes listing of both treasury and corporate bonds as long as the issuing company meets the eligible listing requirement. An investor, either individuals or fund manager, wishing to sell or purchase bonds approaches a stockbroker. The stockbroker and the investor negotiate the bond yield and time to maturity is determined. The agreed price is then offered at the trading floor during the trading period. Stockbrokers converge at the trading floor to purchase or sell the bonds on behalf of bondholders. Once the transaction is effected, the buyer personally settles the payment with the seller after which the stockbroker follows up on the documentation to ensure that the transaction is concluded and the Ownership of the bond transferred to the buyer. The stockbrokers are not party in the exchange of the cash transactions between the buyer and the seller because of the big amounts involved.

When corporate debt securities including bonds are listed at the NSE, the issuer bears the risk. To safeguard against these risks, there should be underwriters for corporate bond issues, promising to take up any shortfalls if corporate bonds cannot be sold at an agreed minimum price (maximum yield). However, in Kenya, there are no official underwriters, instead, investment banks who play a similar role to those of underwriters but do not assume the listing risk. In contrast, for treasury bonds, there are no underwriters, neither is there a requirement for their services. Whenever an issue is made and it receives less than one hundred per cent subscription, treasury usually has to make do with whatever they realize and look for alternative sources of funds to fill the financing gap as a cash management measure, thus taking the listing risk.

The disclosure requirements for bond issuers is covered under regulation 7(1)(c) of the Capital Markets (securities, public offers, listing and disclosures) Regulations 2002, which sets out, in the second schedule of part V, the requirements for Government and corporate securities. Disclosure guidelines for green bonds is still work in progress by the GBPK.

2.7 Precursor conditions supporting launch of green bonds

World Bank (2001), Jones (2002), Christensen (2004), Mbewa, Ngugi, Kithinji (2007) identify key prerequisites for a successful bond market, which are identify various requirements in development of a successful bond market. They include an active money market, a robust legal and regulatory framework, secure and efficient trading and settlement systems, quality information disclosure, a broad investor base, accurate bond pricing and favorable tax policies and tax incentives.

Other studies have examined the determinants of bond markets in more developed economies. Eichengreen and Luengnaruemitchai (2004) consider a number of determinants of bond market development, using data from 1990 to 2001, for a sample of 41 developing and developed countries, with a focus on emerging Asia. Using a regression model on with domestic currency bond markets capitalization as a dependent variable and measures of economic size, trade openness, banking sector size, bank lending spread, interest rate variability, exchange rate variability, capital account openness, fiscal balance, economic

development, law and order, corruption, investment profile, bureaucracy, composite risk, countries whose legal origin is English, and country size in terms of land area. The study concludes that market size matters, while poor accounting standards, private debt markets, corruption and low bureaucratic quality, capital controls and a lack of need for public financing hold back development of the bond market. Well-capitalized bank systems promote bond markets, non-volatility of exchange rates encourages bond market development.

Mbewa, Ngugi, Kithinji (2007), in a study of Kenya's experience in development of its bond market find that a key prerequisite for the development of a corporate bond market is the existence of some form of independent credit risk assessment. A credit rating agency serves as an intermediary between the users and providers of finance. The essence of rating is to promote confidence in the capital markets by enabling the investors to be aware of underlying risks of the issuer or issued financial instruments. (Mbewa, Ngugi & Kithinji, 2007). In the face of under-developed credit rating agencies, commercial banks play a major role as guarantors of the listing of corporate bonds by taking the risk in case of under-subscription, reassuring investors of their investment in bonds. Sinking fund provisions, where funds for redeeming the bonds are accumulated, is not currently provided for in the legal framework for issuers of corporate bonds in Kenya.

Mu et al (2013) conducted an investigation into a number of factors affecting the bond market in Africa using a GMM specification. In the study, Mu et al (2013) concludes that it is useful to look separately at government securities and corporate bond markets in sub-Saharan African countries. That for government bond markets, a combination of structure, policy and institutions variables exert a statistically significant effect on government securities markets. The interest rate spread, the fiscal balance, exchange rate volatility, trade and capital openness variables, and land area are negatively correlated with the development of the market, while English legal origin, lower composite risk (better institutions), law and order, and domestic interest rate volatility variables are positively correlated. For corporate bonds, Mu et al (2013) uses fewer variables and find that economic size, GDP per capita, and land area are positive and significant, suggesting that large size, however measured, appears to be the key factor which contrasts to the market findings on government securities. Credit share in the economy has a strongly significant effect on corporate bond market development, suggesting that corporate bond markets thrive in economies where credit is well entrenched.

2.8 Obstacles and challenges to growth of bond markets in Africa

Corporate bond markets are still in their infancy in most sub-Saharan African countries with the exception of South Africa (Mu et al, 2013). A study by Yartey, C.A. and Adjasi, C.K. (2007) focussed on issues and challenges in development of stock exchanges in sub-Saharan Africa. Financial development affects growth through several channels that are important for sub-Saharan Africa. First, it mobilizes savings from domestic and foreign sources, supports efficient allocations of capital (Acemoglu and Zilibotti 1997; Rajan and Zingales 1998), and increases total factor productivity (King and Levine 1993) African bond markets have been steadily growing in recent years, but nonetheless remain undeveloped (Mu et al, 2013). Sub-Saharan African financial system have been liberalised and are deepening. It is argued that more liberalised encourage bond market development because established interests may not be able to insist on policies that suppress competing sources of supply when the economy is exposed to international competition (Rajan and Zingales, 2003). However, this is increasing linkages to the global financial system, makes them vulnerable to financial fragility.

Another challenge to growth of the bond market in Africa has been efficient risk management facilities such as sinking fund provisions and bank guarantees which boost investor confidence in bonds, as investors can be compensated from funds accumulated in the fund or by the guarantor. This is more important to investors whose funds projects which will rely on cash flows it aims to generate to pay back investors. Sinking fund provisions where funds for redeeming the bonds are accumulated, is not currently made for in the legal framework for issuers in Kenya (Mbewa, Ngugi, Kithinji, 2007). The Bond Exchange of South Africa (BESA) has in place a guarantee fund in compliance with Section 30 of their Act which protects investors while In Korea, commercial banks guarantee issuers of corporate bonds as a form of credit facility or guarantee if they fail to meet all requirements.

The JSE introduced ESG reporting on a comply-or-explain basis in 2002 and since 2010 has similarly required companies to produce integrated reports. Beyond the JSE, no other exchanges have implemented any form of sustainability reporting requirement or voluntary reporting guidelines. The company disclosure review confirmed that levels of sustainability reporting by listed companies were high in South Africa but very low elsewhere in the region (ACCA, 2014). Disclosure rules are aimed at ensuring that the activities of quoted companies

are transparent and that any risk the company is exposed to is signaled through the information disclosed.

Sovereign bonds offer issuing countries and opportunity for finance development but create risks. Issues include create liquidity, interest rate and exchange rate risk for issuing countries, Debt sustainability dependent upon continued strong GDP growth.

Presently Africa relies on green technologies from Asia and other countries. Research and development plays a significant role in supporting transition to a green economy. For those countries with lesser capacity to invest in R&D, knowledge sharing and peer-to-peer learning platforms such as the Green Growth Best Practices (GGBP) can play a much needed supportive role. importance for African countries to receive international assistance to initiate green technologies. (AfDB-OECD, 2013)

2.9 Green washing

With a lot of talk of 'going green', green washing becomes a threat to the development of the green bond market. Environmentalist Jay Westerveld came up with the concept of 'green washing' in 1986 which he describes as a deceptive use of green PR in order to promote a misleading perception that a company's policies or products (such as goods or services) are environmentally friendly (Priti, 2014).

The threat of green washing has given rise to developments such as the Green Bond Principles (GBP), which are voluntary guidelines that are designed to be used across the industry to support transparency, disclosure and integrity in the development of the Green Bond Market. The GBP has membership covering major investors, issuers and underwriters. The GBP encompasses four core components that are key for disclosure – use of proceeds, project evaluation and selection, management of bond proceeds and reporting.

The GBP encourages appointing of external reviewers with expertise in environment sustainability and other aspects of green bond issuance to assess conformance to the four core GBP components. The GBP encourages use of an external reviewer to firstly issue a second opinion independent from that of the advisor of the green bond structure. The Bond

may then go for further verification by a different reviewer weighs the bond against set internal and external environmental criteria. The verification process also extends to reviewing the issuers process of tracking use, management and reporting on the bond. After verification, the bond may then be certified against a standard or label which involves an external expert reviewing its consistency with set criteria. After certification the Bond may then be rated against a specified scoring methodology - which is dissimilar to the normal credit rating but may incorporate inherent risks. The reviews proposed by GBP serve as best practice, but remain voluntary guidelines. Certifying climate bonds using the CBI standards ensures that assets or projects financed by the verified green bond are consistent with the 2°C warming limit set in the Paris Agreement (CBI, 2018).

2.10 Linking Green bonds to Government policy and institutional frameworks

Kenya's investment climate including firm policies to guide low-carbon investment from the national level cascaded down to Kenya's 47 counties will be instrumental in transitioning to a green economy and specifically encouraging private sector investment in green bonds from international markets. The NCCAP recognizes this very fact and suggests key elements of what an 'investment grade policy' for low-carbon (international) private sector investment might look like. The report suggests that key elements are centered around the ideas such as open dialogue; Transparent, long-term and predictable regulation; The use of price signals to support low-carbon options, The appropriate use of regulation and standards and Public engagement with sources of private finance.

Several policy documents have been churned by the Kenyan government and government-sponsored institutions to guide transition to a low-carbon economy. These policy documents lay the ground for a viable green bond market in Kenya. I will describe briefly below each document and key take-aways from each.

Kenya Vision 2030

In 2007 Kenya launched Vision 2030 which will be the long-term development blueprint which aims to transform Kenya into "a newly industrialising, middle-income country providing a high quality of life to all its citizens in a clean and secure environment." The Kenya's Vision

2030 is anchored on three pillars - Economic, Social and Political. This social pillar seeks to build a just and cohesive society with social equity in a clean and healthy environment. The blueprint identifies specific strategies in promoting environmental conservation i.e. improving pollution and waste management through design and application of economic incentives and commissioning of PPPs for improved efficiency in water and sanitation delivery as well as improving capacity for adaptation to global climate change and harmonisation of environment-related laws for better environmental planning and governance.

National Climate Change Response Strategy (NCCRS)

The document was formulated after thirteen consultative workshops to respond to climate change challenges that pose a threat to Kenya's socio-economic development. The strategy provides evidence of climate change in Kenya in terms of rainfall and temperature variation. The document identifies possible mitigation and adaptation actions across different sectors in Kenya. The strategy also proposes a wide range of vulnerability assessments be conducted. It also proposes monitoring of the impact of these effects and targeted capacity building across different areas including the area of carbon finance.

The National Climate Change Action Plan (NCAAP, 2013-2017)

The NCCAP (2013 – 2017) was formulated to put into motion the National Climate Change Response Strategy (NCCRS) of 2010. According to the NCCAP, an enabling environment for climate resilient interventions is characterised by the following: appropriate institutions, national legal instruments including codes and standards, a supportive investment environment, appropriate technology development, and access to information to help make informed choices.

The National Adaptation Plan (NAP, 2015-2030)

The goal of the NAP is to “Enhance Kenya's climate resilience towards the attainment of Vision 2030 and beyond.” The NAP provides a monitoring and evaluation system for its implementation. Further, the NAP also provides Performance Indicators for Adaptation which will track its implementation. According to the NAP, Kenya's adaptation finance is obtained from domestic and international sources through various mechanisms – Green bonds speaks to this very area.

The National Climate Change Act (2016)

The Act was enacted in May 2016 following extensive work by the Kenya climate change working group. The Overall objective of the Act is “to provide regulatory framework for enhanced response to climate change; and to provide for mechanism and measures to achieve low carbon climate development.” (Ministry of Environment and Natural Resources, 2016). Part II of the act establishes a National Climate Change Council (NCCC), chaired by the President and establishes a climate change directorate which is the lead climate change agency mandated to coordinate matters pertaining to climate change in Kenya. The directorate is also tasked with mobilizing climate finance at the national straight to the county level. The Act more importantly establishes a climate change fund that will sit at the national treasury which will be used to fund . The fund shall be a financing mechanism for priority climate change actions and interventions approved by the NCCC.

National Climate Finance Policy (NCFP) (2016)

With the realisation of the significant financial undertaking of tackling climate change, the government formulated the NCFP which provides guidance for mobilising climate funds from various sources, enhancing access to domestic and international climate finance including the Green Climate Fund. The policy acknowledges that effective mobilization of financial resources requires participation of stakeholders from public and private sector coupled with effective coordination mechanisms at all levels of governance

The Third Medium Term Plan (MTP III, 2018-2022)

MTP I and MTP II 2013-2017 addressed climate change as a sub-section under the Environment sector. MTP III goes on to provide a definitive roadmap including prioritized projects, programmes and initiatives that will be implemented in the next 5 years to build a green economy. Kenya’s 47 county governments are also required to work on their County Integrated Development Plans (CIDPs), in which they will align their programmes and projects to the MTP III as provided by the constitution 2010.

National Green Climate Fund (GCF) Strategy

The Green Climate Fund was established in 2010 by the Parties to the United Nations Convention on Climate Change (UNFCCC) With a mandate of catalysing a shift towards low-emission and climate resilient pathways in developing countries through mobilizing and

channelling funds to developing countries (GCF 2017). GCF offers a wide range of financial products including grants, concessional loans, subordinated debt, equity, and guarantees (GCF, 2017). The GCF works with a network of 54 institutions which disburse funds to recipient countries using diverse financial instruments such as loans, equity, guarantees, and grants. In Kenya accredited institutions are National Environment Management Authority of Kenya (NEMA) and United Nations Environment Programme (UNEP) which is effectively a global body only headquartered in Kenya. The document sets clear the operational modalities of the fund and means of access sets as well as a result management framework.

2.11 Conclusion

For a critical analysis of how ready the Nairobi Securities Exchange is to float a green bond, special attention ought to be paid to the main prerequisite conditions for a successful bond market. An analysis of the Kenya's green investing environment ought to be done to pinpoint opportunities and challenges to a successful green bond market.

The increasing green campaign has implications on how governments and corporates produce goods and services as well as how they invest as there is need for sufficient capital to manage transition to green economies. Green bonds allows the private sector and government and to do their part. The government of Kenya seems to be doing a lot to set the country in a trajectory for green growth.

Since the international green bond market is not regulated and with guidelines that are only voluntary, greenwashing becomes a rife risk and a threat to development of a local green bond market. Higher transparency and disclosure in terms of ESG and sustainability reporting lower the risk of green washing. Likewise, independent credit risk assessment as well as risk management tools such as sinking funds, underwriters or guarantees are crucial to the success of the green bond market.

3 RESEARCH METHODOLOGY

3.1 Research design

The research design of this study is descriptive as it seeks to study the status of the green bond market in Kenya. Aggarwal (2008), explains descriptive research as a study that aims to gather information about prevailing conditions or situations for description and interpretation. Marshall (1996) contends that the choice between a qualitative study and a quantitative study is influenced by the research questions and not by preference of the researcher. Qualitative research uses a naturalistic approach that seeks to understand phenomena in context-specific settings, such as "real world setting [where] the researcher does not attempt to manipulate the phenomenon of interest" (Patton, 2001: 39). The choice of a qualitative study was preferred as it addressed the major objectives and the research questions proposed in the study adequately. Qualitative studies aim to provide an understanding of complex psychosocial issues and are most useful for answering humanistic 'why?' and 'how?' questions, Marshall (1996). A good qualitative study can help us "understand a situation that would otherwise be enigmatic or confusing" (Eisner, 1991: 58). The descriptive design method was suitable as it sought to explain why the NSE has not been able to float a green bond therefore no quantifiable data on the topic.

Tongco et al (2007) suggests seven steps to follow when using a purposive sample which this study will follow;

1. Decide on the research problem.
2. Determine the type of information needed putting in mind time, resources available and the degree for interpretation required.
3. Define the qualities the informant(s) should or should not have.
4. Find your informants based on defined qualities.
5. Keep in mind the importance of reliability and competency in assessing potential informants.
6. Use appropriate data gathering techniques.
7. In analyzing data and interpreting results, remember that purposive sampling is an inherently biased method. Such bias must be documented, and interpretations ought not be applied beyond the population sampled.

Atieno (2009) suggests that the most significant strength of using qualitative research is the ability to understand phenomena in better detail. With qualitative research, the researcher is able to simplify and manage data without destroying its complexity and context. All qualitative data can be assigned meaningful numerical values which can then be manipulated to help one achieve greater insight into the meaning of the data and to help examine specific hypotheses, what is referred to as coding. Atieno (2009) also offers some shortcomings of qualitative research. The main disadvantage is that their findings cannot be extended to wider populations with the same degree of certainty that quantitative analysis can. Secondly, ambiguities inherent in human language can be an obstacle to collecting qualitative data owing to differing interpretations.

3.2 Data Collection

Data gathering is at the heart of research, as the data is meant to contribute to a better understanding of a theoretical framework (Bernard 2002). Since no amount of analysis can make up for improperly collected data, it then becomes imperative that selecting the manner of obtaining data and from whom the data will be acquired be done with sound judgment (Bernard *et al.* 1986).

For purposes of this research, primary data was collected through interviews with experts identified, which was later transcribed into qualitative data for analysis. Face to face interviews enabled collection of detailed information and clarify ambiguities, which is crucial for the study. Hitchcock and Hughes (1995) list eight interview types, the type relevant for this study is the semi structured interview where questions are predetermined, however the interviewer is free to ask for clarification.

Blaxter et al (2006: 172), suggests that it is useful doing interviews because it offers researchers the opportunity to uncover valuable information that is “probably not accessible using techniques such as questionnaires and observations”. Similarly, Kyale (2003) observes that interviews compared to questionnaires are more powerful in producing descriptive data that allows researchers to investigate people's views in greater depth. In contrast Flinders (1997) suggests several limitations to interviews as a data collection technique: individuals available for interviews may not have the desired information; Interviewees may be unwilling

to discuss what they know and the Interviewee may not be able to say what they think, may not have an opinion, or may not be able to state their opinion in a clear way.

Dörnyei (2007) offers two key features of a ‘good’ qualitative interview: “it flows naturally, and it is rich in detail”. It is important therefore to spend time on framing of the questions and consider how the data will be collected: for example, use of a tape recorder, taking notes on the spot or later or simply just by listening only. Spradley (1979) proposes that the Interviewee should be a person with a history of the situation, who is currently in the situation, and who will allow adequate time to interview them. It is also important to know how many interviews are enough and when to stop a particular interview. As it relates to an individual interview, Wolcott (1995) suggests stopping when the data desired is elicited. Data collection started off with a pilot interview which assisted in practicing interview questions, getting initial thoughts on the topic and the interview style.

Table v: Research interview questions

Research Question	Specific Question	Sources
Is the capital market ecosystem in Kenya ready for the floating of green bonds?	Do you think there is enough education along the value chain about the Kenya green Bond programme?	GBPK
	What would you say is the state of the capacity – skills and experience - of players in the capital markets ecosystem to supporting a local green bond market?	Mbewa, Ngugi & Kithinji, 2007 Yartey, C.A. and Adjasi, C.K. (2007)
	What is your opinion about the general architecture of laws and a regulatory framework in supporting a domestic green bond market?	Mbewa, Ngugi & Kithinji, 2007
Are mitigations to risk faced by bond investors in Kenya robust to fuel investment in green bonds?	Do you think there is enough integrity and trust in the market, that investors feel comfortable in how they are investing? that the risks they face or will face are properly managed?	World Bank (2001), Jones (2002), Christensen (2004)
	Do you think having a credit rating is either important or necessary for the floating of a green bond in the Kenyan context?	Mbewa, Ngugi & Kithinji, 2007
Are green initiatives in Kenya well targeted to draw	Do you think the perception that investors in modern times care about use of their funds to ‘go green’	Giamporcaro & Pretorius, 2012

investor interest in green bonds?	over and above the financial return holds true for both international and domestic investors?	UNPRI
	Would you say Kenya's efforts in line with transitioning to a green economy have been deliberate enough?	Kenya climate change working group, 2017 Ministry of Environment and Natural Resources, 2016).
What is the role of government in the successful floating of green bonds in Kenya?	What do you think government of Kenya has done successfully, is doing or has failed to do to catalyse development of a domestic green bond market?	Mu et al (2013)
	Would you say Kenya has an active money market? What is your opinion about current situation of capital flows in and out of Kenya and how that can impact a green bond market?	Yartey, C.A. and Adjasi, C.K. (2007)

3.3 Sampling

The process of selecting a sample is crucial in any research, since it is usually hardly practical, efficient or ethical to study whole populations. The size of the sample is determined by the optimum number necessary to enable valid references to be made about the population whereas the optimum sample is influenced by the parameters of the phenomenon under study, Marshall (1996).

Marshall (1996) cites four reasons suggesting that random sampling is inappropriate for a qualitative study. First, samples for qualitative investigations even if representative tend to be small and the sampling error of such a small sample is likely to be so large that biases are inevitable. Secondly, for a true random sample to be selected, the characteristics of the whole population should be known; this is rarely possible in a complex qualitative study. Thirdly, random sampling of a population is likely to produce a representative sample only if the research characteristics are normally distributed within the population. However, there is no evidence that the values, beliefs and attitudes that form the core of qualitative study are

normally distributed, which makes random sampling inappropriate. Fourthly, it is well recognized by sociologists that people are not equally good at observing, understanding and interpreting their own and other people's behaviour and that qualitative researchers recognize that some informants are 'richer' than others and that these people are more likely to provide insight and understanding for the researcher.

Sharma (2017) also cites two advantages of using a purposive sample. First, is the justification to make generalisations from the sample that is being studied, whether such generalisations are theoretical, analytic and logical in nature. Second is the ability to use purposive sampling as a non-probability sampling technique in instances where the qualitative research designs involve multiple phases, with each phase building on the previous one - a study may be started with a survey, then purposive sampling done based on the survey (Brown 2005).

Sharma (2017) suggests two shortcomings of using a purposive sample. First, purposive samples can be highly prone to researcher bias – this happens when researchers judgements are ill-conceived or poorly considered; that is, where judgements have not been based on clear criteria, whether a theoretical framework, expert elicitation or some other accepted criteria. Secondly, the subjective, non-probability nature of sample selection in purposive sampling means that it can be difficult to defend the representativeness of the sample and therefore harder to justify theoretical/analytic/logical generalisation.

Marshall (1996) puts it that an appropriate sample size for a qualitative study is one that adequately answers the research question. This study employed purposive sampling. A purposive study was ideal for this study as it enabled us answer fully the research questions and help get the most information from the interviewees that will be verbally and qualitatively generalizable. Marshall (1996) asserts that a judgmental or purposive sample involves developing a framework of the variables that might influence an individual's contribution and will be based on the researcher's practical knowledge of the research area, the available literature and evidence from the study itself. The sample included experts from the capital markets authority, the Nairobi stock exchange, government, experts in private investment and environmental sustainability experts as shown below. This variation in the sample helped achieve data saturation for the study.

Table vi: Professional background of targeted Interviewees

Category	Number of interviewees
Academics	3
Nairobi Securities Exchange Management	2
Capital Markets Authority Management	2
Investment professionals	5
Environmental & Sustainability experts	3
Banking experts	3
Development Finance experts	2
Total	20

Out of a target sample of 20 interviewees, a total of 10 responded as follows;

Table vii: Summary of actual interviewees

Interviewee	Organization Type	Position
Interviewee 1	Banking Industry Association	Director, Research and Policy
Interviewee 2	Investment management firm	Managing Director
Interviewee 3	Securities Exchange	Director, Regulatory Affairs
Interviewee 4	International Climate finance Monitor	Africa Programme Manager
Interviewee 5	Investment Bank	Director, Corporate Finance
Interviewee 6	Investment Bank	Senior Analyst – Equities & Fixed income
Interviewee 7	Investment Bank	Head of Research
Interviewee 8	Transaction advisory firm	Senior Manager, Corporate Finance
Interviewee 9	Financial Inclusion trust	Capital markets Development specialist
Interviewee 10	Securities Exchange	Head of Cash market

3.4 Data Analysis

The challenge of interview analysis is moving from a considerably large amount of raw data to the meaning of what has been said. This is not only a process of data analysis but of data reduction (Huberman, 1994). For this study, ideas and relationships in the results were written down on a memo as data analysis was ongoing. Data analysis began with a complete set of collected data in the form of text - transcripts of unstructured interviews. The initial analysis involved listening to the recordings and transcribing the interviews which were then read several times over to synthesize the responses. The data was then coded (categorized) according to the themes emerging from the transcripts – a crucial step. The themes were identified by short phrases - codes. To address the challenge of bulky transcripts the codes were defined across the different interviews for consistency and identified by different colored stickers. A summary of the coded data was compiled to summarize the data. Finally, interpretations were drawn from the results.

Analysis employed the grounded theory which shares some features of qualitative data analysis. Grounded theory employs a 'constant comparative technique' which will allow moving back and forth through the similarities and differences between coded fragments, coherence and incoherence within categories and relative importance of each - in other words relating data to ideas, then ideas to other ideas. Having identified a common feature that unites instances of a phenomenon, there was need to refocus on differences within a category to be able to identify emerging sub-themes. In this way, the full complexity and diversity of the data was made clear. The ultimate objective of constant comparative analysis was to link and integrate themes in such a way that all instances of variation were captured by the emerging theory.

The findings of the analysis were organized around the key themes that emerged from the data. The core theme will be discussed first, and the major themes were discussed in sequence. Introduction of the themes and a discussion of their relationships with one another was also be brought out neatly in the findings.

3.5 Data reliability and validity

Berg (2007) explains two types of validity in social science literature: internal and external. Internal validity refers to the extent to which an investigation is in fact measuring what it is supposed to measure; while external validity answers examines if the findings be generalised. Hitchcock and Hughes (1995, p. 180) offers using triangulation and re-interviewing in the validation process. Triangulation is comparing at least two sources of data. For this study, given we asked similar questions to multiple Interviewees, then similar answers were used to strengthen the validity of the interpretation. An appropriate re-interviewing strategy for this study was to share the transcripts and initial interpretation with the Interviewee and confirmed if they agree with the interpretation or discuss why they do not agree and considered taking in the Interviewee's insights.

Reliability refers to the extent to which a research instrument yields the same results on repeated trials. Brewerton and Millward (2001: 74) contend that due to their openness to so many types of bias, interviews have poor reliability.

Validity of data was also ensured through a thorough literature review to understand the area of study. Conducting efficient interviews - conducting a pilot interview, avoiding asking leading questions taking notes, allowing the interviewee to conclude and clarify their responses - was paramount in ensuring data validity and reliability in this study. Patton (2001) states generalizability as one of the criteria for quality case studies depending on the case selected and studied. In this sense the validity in quantitative research is very specific to the test to which it is applied – where triangulation methods are used in qualitative research.

Tongco et al (2007) suggests that as part of analyzing data and interpreting results one ought to have in mind that purposive sampling is an inherently biased method and that this bias should be documented, and interpretations should not be applied beyond the sampled population. The study posed two limitations. The first is the element of researcher bias inherent in the sample selection. There is significant judgement exercised with a purposive sample when compared to probability sampling techniques where such biases are significantly reduced. Sharma (2017) argues that this judgmental component of purpose sampling is only a major disadvantage when such judgements are ill-conceived or poorly considered; that is, where judgements have not been based on clear criteria, whether a theoretical framework, expert elicitation or some other accepted criteria. The purposive sample for this study was based on a clear criterion; the 20 Interviewees were selected within senior management of players in the capital markets ecosystem with subject knowledge of green bonds. The Interviewees sampled were best placed to answer the research questions and address the research objectives.

The second limitation is the difficulty in defending generalizations in the findings. This is mainly as a result of the judgmental sample that may not be representative of the population. Generalization of findings can be achieved on either a theoretical, analytic or logical basis. Sharma (2017) poses that if different Interviewees were sampled, would the findings and any generalisations have been the same? Generalization of finding for this study on a logical basis. The study sought the opinion of experts in the capital markets ecosystem. Since the Interviewees were selected from among experts from major institutions in the capital markets ecosystem who are actively monitoring development of the green bonds space, the findings can be replicated throughout the pool of experts in the capital markets in Kenya.

4 RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

4.1 Market viewpoints about green bonds in Kenya

Interviewees 2,3 and 5 observed that there is a dominance of government securities over the corporate bonds which is consistent with Mbewa, Ngugi, Kithinji (2007) who observed that the public has trust in government securities as opposed to institutional issuers. Mu et al (2013) also contend that with the exception of South Africa, corporate bond markets are still in their infancy in most sub-Saharan African countries. Interviewee 2,4,5 and 6 that the first issue possibly from government will build a trajectory towards development of the green bond market.

“Trust in the market has been reinforced by the placement of two banks under receivership over integrity issues. Since these banks had corporate bonds and it is still not clear if and how bond investors will be compensated, I would say that trust in the market has suffered a bit. It would be easier, far easier for government to issue a green bond than a corporate.” (Interviewee 6)

Mu et al (2013) however argues that it is important to look at government securities and corporate bond markets in sub-Saharan African countries separately – that in contrast to the government securities market, we find that there are fewer variables that are significantly linked to corporate bond market capitalization. Mu et al (2013) found that economic size and GDP per capita are generally positive and significant, suggesting that larger and more developed economies are more likely to have corporate bond markets. The results thus suggest that government influences corporate bond market development indirectly through speeding up economic growth but that specific policies are less clearly linked to corporate bond market development.

Interviewees 1,2,3 and 6 observed that the Kenyan bond market is generally underdeveloped which has affected the momentum by which the local green bond market is being developed and a maiden green bond be issued and that a dedicated green bond section may not be a critical contributing factor to development of a local green bond market.

“I am a bit concerned. We have challenges even with the sovereign bonds as well only a small portion really trade. The corporate bond side is completely dead, with

less than 1% trading on a year to year. If we are bringing in another dedicated segment will it face the same challenges? those concerns are there.” (Interviewee 2)

From literature review, the top destinations of green bonds have a dedicated section for green bonds. CBI (2018) suggest that exchanges with dedicated green bonds segments increase their visibility and promote transparency and market integrity through their listing requirements. Interviewee 3 who is a senior NSE employee that their board of directors have approved a decision to have a dedicated green bond section to join the other emulate exchanges and hopefully this will popularize the green bond and attract a wider pool of investors.

“We have already made a decision on having a separate section for green bonds and this has been approved by the board. Listing of these instruments is the first phase, there is another phase which that will come after 2-3 years after that market has matured, and that is introducing an index, just to make sure that we are able to track them using an index and giving it as part our daily market information to the public.” (Interviewee 3)

Interviewees 1,3,4 and 6 reiterated that when considering listing rules, one ought to think of a green bond just like any other regular bond. The Interviewees emphasized that indeed that basic understanding will help demystify this instrument and help everyone understand what kind of an instrument it is and how exactly it works. The Interviewees all observed that indeed the main distinguishing characteristic is the fact that the proceeds are allocated to qualifying uses.

“A green bond is unsecured debt, so every investor must go through the process of giving comfort to the investor – detailed memorandum, legal standing, authorization from the regulator etc. this applies for all debt instruments and a green bond will follow that path as well” (Interviewee 1)

‘What I need to clarify is that, for us we are looking at it just like any other bond. So the listing regulations applicable to the other bonds will apply to these green bonds.” (Interviewee 3)

4.2 Challenges in developing a local green bond market

There was consensus from the Interviewees that there has not been enough education along the value chain about the Green Bonds Programme and that this will be important going forward to grow the market. Many observed that the GBPK is a recent development and most of the work now is on setting up the general architecture of the green bond.

“The GBPK is a recent thing, we are now is engaging stakeholders. The key stakeholders are aware, but there is work to be done with other stakeholders such as parliament for purposes of a sovereign green bond and the broader investor community which includes the public.” (Interviewee 1)

“As at now we are still in the framework development stage we are still far along in going to the mass market to educate on green bonds, their issuance and benefits.” (Interviewee 2)

“There is a clear knowledge gap. That is why we have deliberately put in a significant budget for the purposes of investor education and the bonds market is one of our targets.” (Interviewee 3)

Interviewee 4 who is the CBI coordinator for Green bonds market in Africa however observed whereas that ‘enough education’ is a relative term and that there can never be enough education on the subject as it is to evolve over time. He observed that there have been regular engagements with stakeholders and enumerated several forums with the government and stakeholders on the area.

Cap 485A of the Capital Market Authority Act does not make credit rating of the bond issued by companies in Kenya compulsory. Interviewee 4 observed that in the Kenyan market some of the vanilla bonds that have been issued are not rated and therefore having a credit rating on a bond should not be a hinderance to having a pioneer green bond. However, all Interviewees agreed that the international investors are keen on a bond rating as it provides a reliable third-party indication of the return from the bond. The Interviewees also pointed out that the investor prospectus given by the issuer which is reviewed by the regulators is also an important source of information for investors. Interviewees 1 and 4 however observed that the fact that a bond is green does not take away the initial due diligence required for listing of

any other bond. It is however important to note that credit rating agencies are not always accurate and this then requires an investor to research risks thoroughly before investing in a bond.

“The structure of a green bond is the same as that of a vanilla bond. You don’t need a credit rating because the bond is green, you need a credit rating because it is a bond. The credit rating agencies will do the same for both green bonds and vanilla bonds and therefore a credit rating does not influence the green status of the bond itself, what however is important is having the bond verified as green.” (Interviewee 4)

Mbewa, Ngugi, Kithinji (2007) concluded that local players suggested that the eligibility requirements to register as a credit rating agency and the infrastructure needed is too limiting for or is not affordable by local companies – and this has been responsible for the underdeveloped local credit rating system. Interviewee 2, 3 and 6 observed that there are international players in the Kenyan market who have credibility. Interviewee 3 disclaimed that he has reservations in the way they perform the rating as they are qualitative and less quantitative and observed that given the market is still evolving these aspects change from time to time.

“The international ones are fairly credible, when you look at how ratings are done with different international players the methodology is similar.” (Interviewee 3)

“Kenyan credit rating agencies still have a long way to go, I wouldn’t count on them at all. An issuer would have to work with globally renowned agencies such as GCR. This is actually a big issue in Kenya right now as a number of corporate issues have defaulted suggesting that the initial assessment may not have been right”. (Interviewee 6)

“It is not a very clear process. I find that it is a very qualitative process. The same trend would apply when it comes to green bonds. Numbers cannot tell the whole story sometimes especially if you go to the realm of impact reporting.” (Interviewee 2)

“Credit rating agencies in Kenya collect data on individuals, very few rate the credit worthiness of institutions. They basically give a credit score for retail borrowers not corporates. We tend to rely on an international agency based in South Africa - GCR.’ (Interviewee 7)

Mbewa, Ngugi, Kithinji (2007) conclude that a challenge the market is faced with is lack of expertise in packaging bonds on behalf of the issuers and that there is a need for training industry to build capacity to equip the players with skills to carry out their various functions. Interviewee 1 and 2 Interviewees however that whereas there is enough skills and experiences in the market to service the green bond market. However, Interviewees 3 and 4 noted that there is need to borrow from the international market given they are already well established and may offer valuable lessons. Additionally, with the increasing activity in the green bond space including evolving standards, there will arise a need for more players to be involved to add value to the market. Interviewee 5 and 6 argued that there are skills in the market, it has been is below the more developed markets but the skills have been increasing over the years

“For now, we are going to place some reliance on international experts for purposes of verifying the greenness of a bond. We are also considering having reports of international credit agencies.” (Interviewee 3)

“I think the capacity is there. There are few players some international who can step in to support the market when the market starts operating. However, as the market grows, there will be a need to have more players and more depth.” (Interviewee 2)

“The exchange in Kenya is arguably better prepared compared to other exchanges in Africa. I am also confident the market is very deep from a skills and a technical expertise standpoint just not from a practical experience stand point” (Interviewee 6)

Barclays (2015) contends that the quality of third party reviews and impact reporting has become a significant differentiator for the investor base – that issuers who provide high-quality information about the environmental benefits of the projects being funded attracting greater investor demand. All Interviewees agreed that verifying a bond as green is ultimately important for floating of green bonds as this is the only item that is unique to green bonds. Alongside verifying of green bonds is reporting and disclosures required for issuers. Clear reporting guidelines will be crucial to prevent green washing where investment is collected from the public and diverted to other projects. investors need to be assured that the proceeds of the green bonds in which they invest are being allocated to appropriate qualifying projects that generate the desired “green” impacts. According to CBI/HSBC (2015, to secure the assurance that proceeds of green bonds are being allocated to appropriate

projects, the “majority of issuers” choose to retain specialists to provide assurances as to the continuing greenness which may include second-party reviews and consultation, audits and third-party certifications.

“We are also demanding to be given very clear and elaborate disclosures on the use of proceeds because it is very easy for somebody to list an instrument as green, collect money and divert the same, One tool we are going to use as regulators is that whenever you are in breach in terms of use of proceeds we automatically degrade you from a green bond which we know or expect will be enjoying certain policy and tax incentives.” (Interviewee 3)

Table viii: Own Compilation. Summary of responses on challenges of a green bond market in Kenya

Category	Themes	Codes	Positive	Indifferent/ unsure	Negative
Challenges	Lack of education along value chain	Lack of education along value chain	Interviewee 1,2,3,5,6,7,9 & 10	Interviewee 4 & 8	None
	Underdeveloped local bond market	Lack of local investor buy-in/ local drive for responsible investment	Interviewee 2,3,5,6,8,9 & 10	None	Interviewee 1,4 & 7
		Insufficient local domestic savings for investment	Interviewee 1,2,5,6,7,8 & 9	Interviewee 3,4 & 10	None
	Undefined structure of the green bond	Underdeveloped credit rating market and inadequate risk management tools	Interviewee 2,3,5,6,7 & 10	Interviewee 1,4,8 & 9	None
		Unclear verification and reporting requirements	Interviewee 1,2,3,4,5,6,7,8,9 & 10	None	None
		Inadequate capacity of local players	Interviewee 1,2,3,6, 7 & 9	Interviewee 3, 4 & 10	Interviewee 5 & 8

4.3 Enablers of developing a local green bond market

World Bank (2001), Jones (2002), Christensen (2004), Mbewa Ngugi, Kithinji (2007) identify key prerequisites for a successful bond market, which are identify various requirements in development of a successful bond market. They include an active money market, a robust

legal and regulatory framework, secure and efficient trading and settlement systems, quality information disclosure, a broad investor base, accurate bond pricing and favorable tax policies and tax incentives.

The Interviewees observed that the laws and market regulations governing the bond market are robust and that there is need to have compliance and reporting guidelines on green bonds. Interviewee 3 stressed the importance of disclosures to protect against greenwashing the instruments.

“The discussion we are having right now is on introducing another layer of compliance for purposes of providing an assurance to the market that this bond is listed as green and continues to be green that is why we are advising on experts certifying on greenness and introducing other conditions on continuous disclosure to make sure that we are aligned to international standards of disclosure on greenness.”
(Interviewee 3)

“Quite robust. As much as we have borrowed a lot from international standards, because we cannot reinvent the wheel, we are trying to ensure is that there is a clear link between international standards and the regulations that govern listing of public instruments in order to ensure that we as regulators have a hand in terms of enforcement with continuing listing obligations.” (Interviewee 3)

Mbewa, Ngugi, Kithinji (2007) observed that listing of some corporate bond issues had failed due to inability of the issuers to meet the eligibility criteria of CMA such as debt ratios, lack of guarantees, cash flow challenges among others.

The IFC Green Bond Cornerstone Fund of USD 325 Mn which Kenya was identified to benefit from along with other 23 countries is evidence of the bulging pool of finance up for the taking - the GBPK was meant to tap into such funds. All Interviewees observed that there is a wide pool of finance mostly international available for Kenya to tap into with green bonds. Interviewees 2,3,5 and 6 felt that a typical Kenyan investor whether individual or institutional is interested in the returns of his investment vis a vis its accompanying risk as opposed to the idea of impact investing. Interviewees pointed out banks, pension funds and insurance companies as the biggest potential local source of green bond funds although none presently have a laid out investment criteria to invest in impact areas.

“I know there is a developing pool of investors who care about that, but majority of Kenyan investors definitely look at the returns vis a vis the risk of a given instrument. But for international investors, we have gotten feedback from our research that there are those who will only invest here because it is green.” (Interviewee 3)

“I think that we are still purely yield driven... What I mean to say is that if non-green investments were offering way higher yields than green investments, green investments would not stand much of a chance.” (Interviewee 6)

Mu et al (2013) conclude that Sub-Saharan African governments should strive to develop their economies and this will in turn lead to greater corporate bond market development and deeper government securities markets, which will have a virtuous influence on economic development. All Interviewees except one noted that the Government has made considerable contributions towards transitioning into a green economy and collaborating with stakeholders in developing a local green bond market. Interviewee 6 noted that the government has not been deliberate enough and that there was need for more consultations especially with fund managers and various regulatory bodies to take advantage of such instruments at the earliest.

“Definitely. That is why one of the major stakeholders in this initiative is the National treasury, and they have also considered providing tax and policy incentives for this particular instrument.” (Interviewee 3)

“We have met parliamentarians on the subject. The Governor of the Central Bank is the patron of the GBPK itself, if it were not for this commitment we would not be here.” (Interviewee 4)

“Absolutely not, I think there is need for more consultations especially with fund managers and various regulatory bodies, we ought to have had a green bond long time ago. The government needs to be the first issuer, it also needs to consolidate its deficits so that yields on its securities can come down.” (Interviewee 6)

Interviewees 2,3,6 & 7 observed that Kenya has an active money market and that movement of capital in the markets does affect how the bond market grows. Foreign capital inflows are much needed for investment in green bonds as domestic savings alone will not be substantial

enough to a vibrant local market. Whereas the Capital Markets Regulations 2002 does not restrict foreign investor participation in government securities or corporate bonds, the bond market in Kenya is underdeveloped and therefore does not attract foreign participation as compared to foreign investment in Equities in the same market - this was argued by Interviewees 2, 3 and 5.

“With the way the bond market operates now, 99% is government bond and less than 1% is corporate bonds with most activity coming from Banks and pension funds. The Bond market has attracted very little interest from foreign investors which is the complete opposite of the equity market, we still don’t have answers to that. Maybe we might see the green bond starting to get more interest which will open up the market.” (Interviewee 2)

“I am happy that there are no restrictions, I think it needs to remain that way because foreign inflows are key to developing the green bond market.” (Interviewee 6)

Eichengreen and Luengnaruemitchai (2004) suggests that non-volatility of exchange rates encourages bond market development as it protects against exchange rate risk for instruments issued in foreign currency. Interviewee 1 observed that Kenya has had an open capital account since the structural adjustment programmes in the early 1990s. Additionally Kenya has a fairly free-floating exchange rate. However, Interviewee 1 observed that this ought to be looked more broadly - that once the constraints to free movement of capital are removed then the flow of capital in and out of Kenya will be determined by whether the local fundamentals such as the strength of institutions, market volatility etc. are favourable to attract resources to an economy. He also observed that this ought to be looked at from time to time as opposed to as an event.

“If you have some market volatility you won’t expect capital to flow to the economy. At that point it won’t matter if you have an open capital account or not. You have to look at other contributors to movement of capital on the back of that open capital account” (Interviewee 1)

Table ix: Own Compilation. Summary of responses on enablers of a green bond market in Kenya

Category	Themes	Codes	Positive	Indifferent/unsure	Negative
Enablers	Market enablers	Integrity in the capital market	Interviewee 1,2,3,5,6,7,8 & 9	Interviewee 4 & 10	None
		Active money market and free capital movement	Interviewee 2,3,5,6,7,8 & 10	Interviewee 1,4 & 9	None
	Stakeholder enablers	Significant pool of potential investors	Interviewees 1,2,3,4,5,6,7, 8,9 & 10	None	None
		Government support	Interviewee 1,2,3,4,5,8 & 10	Interviewee 5, 7 & 9	Interviewee 6

4.4 Opportunities for developing a green bonds market in Kenya

Rajan and Zingales (2003) argue that Sub-Saharan African financial system have been liberalized and are deepening and that this encourage development of a bond market given interests already present may not be able to insist on policies that suppress competing sources of supply when the economy is exposed to international competition. In 2017, the government of Kenya mobile-based treasury bond – the first in the world. The bonds are tradeable in the secondary market and this enhances retail investor participation in the market by bringing trading platform closer to the investor. Interviewee 1 and 7 observed that Kenya has a vibrant money market and this presents an opportunity for the government and corporates to list digital bonds (M-Akiba).

“We already have digital government bonds which have been oversubscribed in the past. Nothing stops the government from listing a digital green bond.” (Interviewee 1)

All Interviewees proposed that an incentive framework will ensure the bonds get investors and promote growth of the green bond market. Incentives could come in the form of tax and a higher coupon/ interest rate and other policies. There is precedence to this - the government of Kenya has floated various infrastructure bonds in the past with an attractive coupon return rate of 12% and a tax-free return. Having a higher coupon rate will help shield the investor against interest rate risk as an investor will be covered in the event of increasing interest rates in the market before maturity date.

4.5 Conclusion on findings

Government has a key role to play in strengthening domestic policy frameworks to catalyse and mobilise investment in green bonds. Kenya has no restrictions on converting or transferring funds associated with investment, investors can repatriate their profits or interest freely. Equally, most foreign currency is readily available from commercial banks and foreign exchange bureaus and can be freely bought and sold by local and foreign investors. Education along the value chain will be fundamentally important in order to improve the level of investment on green bonds. Education ought to be continuous and aligned with the changing market dynamics. Additionally, it is important for local professionals to build their capacity to support a domestic green bond market in packaging of the bonds especially in the areas of credit rating, risk management and reporting.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

The Green Bonds Programme Kenya (GBPK) is being fuelled by international players such as the International Finance Corporation (IFC), Climate Bonds Initiative (CBI), Financial Sector Deepening (FSD) in conjunction with several local players such as the Nairobi Securities Exchange (NSE), Kenya Bankers Association (KBA) and Capital Markets Authority (CMA). Although still in the framework stage, there is need for more education and active participation of the main market players such as investment banks and transaction advisors about the GBPK. Further, a deliberate, intensive sensitization campaign will enable local institutional investors to buy into the idea of a green bond. Additionally, as a direct consequence of proper education, an active market with participation from the local institutional investors will attract more international investors and ultimately lead to a vibrant market.

The capital market players are looking to import expertise from better developed markets to assist in different aspects of the development of a local green bond market. Looking to expertise internationally is not necessarily a bad thing given the markets are more developed markets may offer valuable lessons that will allow Kenya to tailor the lessons to its requirements. Going forward as the market grows, there will be need for the local market to build their own capacity of professionals and experts to bring value to the market. Skills needed will include among others verification services and credit rating agencies.

All Interviewees argue that international investors are keen on credit rating of bonds as well as credit worthiness of issuing institutions. Local investors are mostly interested in returns over impact investing and would prefer government securities to corporate bonds the perception of higher risk with the for latter. There is need for proper packaging of the green bond in terms of risk management. There is need for players to consider having bonds not only verified as green but also rated by credible agencies to build confidence among both local and international investors. Other tools such as a requirement to have a bank guarantee for each bond listed or an investor protection fund for the green bond market to guarantee payback could also be as a measure of building investor confidence in the market. Mbewa, Ngugi, Kithinji (2007) argue that on the backdrop of under-developed credit rating agencies, commercial banks play a major role as guarantors of the listing of bonds by taking the risk in

case of under-subscription as well as providing an extra layer of comfort to investors. However, such tools ought to be applied with caution as they will raise the cost of issuing the bond which may be transferred to the investor and thus raise the price of the bond.

Interviewees observed that an important component of the green bond space will be the aspect of reporting. Reporting is important not only to regulators but the investor and general public. Reporting should not only be accurate but also regular understandable by the relevant stakeholders. Reporting on green bonds will signal the market on areas such as payback, risk and impact. The Nairobi Securities Exchange ought to come up with robust reporting guidelines which they can use to enforce compliance by issuers. Reporting being important ought to be mandatory and regular in order to ensure the said instruments are maintaining their greenness.

Kenya does not save enough to invest in mega projects such as the ones the green bonds are expected to fund. The Mobile money platform provides a potentially simpler, more accessible trading platform for green bonds. The mobile market plays a huge role in financial inclusion in Kenya and will play the important role of allowing small savers to participate in the green bond market. The GBPK ought to take advantage of the mobile money platforms in the country to penetrate the local investor pool and create a vibrant market for green bonds.

Majority of the stakeholders felt that the Government is doing quite a lot to aid the programme. A few however felt that government effort has not been deliberate enough and that the process has been prolonged, and this has in turn slowed down development of a local green bond market despite the availability of potential investors. All Interviewees felt that there is room for government to do more. Majority of the Interviewees were convinced that one way the government can do more is to take advantage of the good performance of government securities by the listing of a sovereign green bond. A sovereign green bond will encounter less bureaucracy as opposed to an institutional green bond and will signal the markets significantly and lay the ground for development of the green bond market.

A convincing and sustainable incentive framework for green bonds should be developed and offered as a sweetener to potential bond holders. Incentives have worked in the past in Kenya with an example of the infrastructure bonds and digital government bonds. An incentive framework will have a knock-on effect of pulling in local investors, creating a vibrant local market and in turn attracting foreign interest in the market.

Interviewees observed that Kenya has no shortage of laws and regulations for the capital markets. Mbewa, Ngugi, Kithinji (2007) observed that there have been several failed bond listings by corporates for different reasons. The central Bank has also recently placed a few Banks who had floated bonds in the market – this shows that the rules of the game are clear. On the surface the green bond models the regular/ vanilla bond and therefore the fundamental bond listing requirements are expected to be the same. There is however a need for clear guidelines on verification and subsequent reporting on the greenness of the bonds.

Interviewees observed that Kenya has an active money market and does not impose controls of capital flow. They also observed that movement of capital will promote development of the local green bond market – this is consistent with Christensen (2004) and Mbewa, Ngugi, Kithinji (2007). However, an open capital policy is not an end in itself; that one ought to be cognizant of other prevalent push and pull factors that will affect free capital flow in the economy.

5.2 Recommendations

In order to promote investment, continuous stakeholder education should be done to create awareness of features of the green bond as an investment vehicle, financial benefits and environmental impact the same. Institutions of learning and industry players should develop curricula in order to make this possible.

Domestic players including credit rating agencies, transaction advisors and more importantly environmental auditors should build their capacity in order to meet the match the expertise that green bonds will demand. Local players should additionally borrow from and collaborate with other established international players to get a proper balance between tailoring to what is fit for our local purposes and getting the best practise and avoid pitfalls encountered by other established green bond markets. Building domestic capacity should extend to strengthening of local institutions such as the National Environment Management Authority (NEMA) and having them participate in the framework process in order to build the required consensus and synergy for cooperation.

In order to create momentum and build confidence in a domestic green bond market, the government should consider floating a sovereign bond. Government should additionally sustain the policies around free capital flow and provide other policy incentives for the GPBK for the purposes of creating a conducive investment environment market for investors.

Finally, local players need to own the GBPK by calling on participation of more local players especially at the framework stage. Local participation is crucial in the creation of green specifications, reporting guidelines and policies that are localized to Kenya's context to generate the most impact and make the GPBK a success.

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